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09/503,282	02/14/2000	Dung Le Huynh	230074-0223	6335

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EXAMINER
SONG, HOSUK

ART UNIT	PAPER NUMBER
2131	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

	Application No. **09/503,282**	Applicant(s) **HUYNH et al.**
	Examiner **Ho S. Song**	Art Unit **2131**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___*3*___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 10, 2002* _____ .

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-31* _____ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-31* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved   b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a) ☐ All b) ☐ Some* c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1-3,5-7,15,22 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al.(US 5,774,551).

In claims 1,5, Wu discloses a control unit having a data input bus (fig.1). Encryption processing unit in (col.3, lines 58-62). First and second authentication processing unit in (col.8, lines 61-66). A local data bus, independent of the data input bus to the control unit, coupling the control unit to each of the encryption and authentication processing units and a second data bus from the encryption unit to each authentication unit, including a data bus from the first authentication processing unit to the second authentication processing unit in (fig.1 #115,109,123 and col.3, lines 56-66).

In claims 2,6, Wu disclose wherein data input bus of the control unit is coupled to a processor bus and each of encryption and authentication processing units comprises a data input bus coupled to the processor bus in (fig.1,#109,123).

In claim 7, Wu discloses first authentication unit and second authentication processing unit in (col.8, lines 61-65).

In claim 3, Wu discloses data input bus of the control unit is coupled to a processor bus

and each of encryption and authentication processing units comprises a data input bus to the

processor bus and means for reading and writing data on the processor bus in (see fig.3).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 4,8-21,15,22,23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Wu et al.(US 5,774,551).

In claims 4,8, Wu discloses all the limitations above. However, Wu does not discloses

second data bus comprising a daisy-chain connection between the encryption and authentication

processing units. The examiner takes Official notice that chain is well known in the art. It is

widely used in order to eliminate conflicting requests to use the channel(bus) to which all the

devices are connected, each device is given a different priority.

In claims 9,16,23,Wu discloses encrypting and authenticating a first packet and discloses

two authentication services connected to the encryption unit by a data bus in (fig.1 and col.15,

lines 53-67).. Wu does not specifically discloses performing encryption on a first data packet and

after completion of the encryption of the first data packet, performing authentication of the first

packet and performing encryption of a second data packet prior to completion of authentication

of the first data packet. The examiner takes Official notice that encrypting a second packet before

authentication is well known in the art. For example, parallel encryption scheme where first and

second packets are encrypted at the same time where second packet does not wait for first packet

to be authenticated thus allowing faster encryption/authentication process when transmitting over

the network or encrypting a second packet before first packet is authenticated or encrypting a

second packet while authenticating first packet eliminates waiting time thus enhances encryption

/authentication processing speed.

In claim 10,17, Wu discloses step of performing a second authentication on the first data

packet of data in (col.7, table 1).

In claims 11-14,18-21, Wu discloses appending data to first authentication and second

authentication in (col.3, lines 56-66).

In claims 24-28 see claims rejection 10-14 above.

In claims 29-31 see claims rejection 9,23 above.

In claims 15,22, Wu discloses an encrypting a first packet with an encryption processing

module and authenticating the encrypted first data packet with a first authentication processing

module in (fig.1 and col.col.3, lines 56-62; col.15, lines 54-67). Wu does not specifically

discloses encrypting a second data packet with the encryption processing module while

authenticating the first data packet with the first authentication processing module connected to

the encryption processing module by a data bus and authenticating the second data packet with

the first authentication processing module. Official notice is taken that this is well known in the

art, such as prioritizing and parallel processing method. One of ordinary skill in the art would be

motivated to use FIFO or parallel processing method in order to increase data efficiency,speed

and minimize data errors thus providing efficient throughput system for managing high speed

network.

Response to Applicant's Arguments

4.   Applicant has amended claims 1-7,9,15,16,23,and 29-31.

5.   Claims 15 and 22 rejected under USC 102(b) are withdrawn in view of applicant's

arguments. See new rejection above.

Applicant argues that Wu's patent does not teach a packet processor comprising buses

between a plurality of proicessing units that process data independently of the main processor and

furthermore Wu does not teach a local data bus, independent of the data input bus to the control

unit, coupling the control unit to each of the encryption and authentication units. Nor does Wu

teach a second data bus from the encryption processing unit to each authentication processing

unit, including a data bus from the first authentication processing unit to the second authentication

processing unit. *In response*: first, applicant's arguments on "Wu does not teach......plurality of

processing units that process data *independently of the main processor* " it is unclear as to what

the main processor applicant is referring to. Is applicant referring to main processor in a control

unit in claim 1? or a computer processor?. Claim 1 is silent on main processor that process data

independently. Second, Wu does teach local data bus, independent of the data input bus to the

control units. Fig.1 clearly shows input data bus coming in from #137 and 135 and local data bus

#115(CPU) connected to addressable memory(#103) where it is couple with encryption and

authentication units in(#109 authentication services and encryption unit disclosed in col.3, lines

56-62 and fig.1 and col.15, lines 54-63). Wu discloses first and second authenication processing

units in (col.8, lines 61-65). *Applicant argues that* in amended claim 2, Wu does not teach "said

data input bus of the control unit is coupled to a processor bus and each of said encryption and

authentication units comprises a data input bus coupled to the processor bus". *In response*: Wu

teaches data input bus of the control unit in (fig.1from #139 is conntected to CPU #115) and

coupled to a processor(either #135 or #101). Wu teaches authentication processing units(#109 in

fig.1) comprises a data input bus coupled to the processor bus(fig.1#115 and #103). *Applicant

further argues that* Wu does not teach that a data input bus of the control unit is coupled to a

processor bus and each of said encryption and authencation processing unit s comprises a data

input bus coupled to the processor bus. *In response*: the examiner disagree; Wu's patent does

discloses these features in (fig.1). *Applicant argues that in claim 3,* Wu does not disclose each

of encryption and authentication processing units comprises a data bus to the processor bus and

means for reading and writing data on the processor bus in fig.3. *In response*: reading, writing

process by fig.3, #109 includes authentication and also encrypt the user's other authentication

tokens for other secondary authentication services. See (col.3, lines 58-62) and they're connected

by a bus. *Applicant argues that in claims 15 and 22,* Wu does not teach encryption or

authentication modules which process data independently of the main processor. Nor does Wu

teach encrypting a second packet with the encryption processing module while autheticating the

first data packet with the first authentication processing module connected to the encryption

processing module by a data bus. *In response:* see new rejections presented above. *In claims*

4,8, Applicant argues that the examiner cites no references that teach or suggest such a daisy

chain connecting encryption and authentication processing unit. *In response:* the examiner

provides a reference(US 5,987,126) that teaches daisy chain in an authentication/encryption

environment. *Applicant argues that* Wu does not teach or suggest encryption and authentication

processing units that process data independently of the main processor. *In response:* see claim 1

response above. *Applicant argues that* Wu does not teach or suggest an authentcation

processing unit connected to an encryption processing unit by a data bus. *In response:* the

examiner disagree, Wu discloses that authenticaton services may include encrypted key based

menchaism such as Diffie Hellman,RSA,Kerberos etc where authentication service and encryption

unit communicates each other. Also token(encryption unit) communicates with authentication

unit. It is inherent that theses two services are connected each other by means of hardwire lines in

order to communicate each other. Applicant argues that Wu does not teach or suggest peforming

encryption on a first data packet and after completion of the encryption of the first data packet,

performing authentication of the first data and performing encryption of a second data packet

prior to completion of authentication of the first data packet. *Applicant argues that* in claims

9,16, Wu does not teach or suggest performing encryption on a first data packet and after

completion of the encryption of the first data packet, performing authentication of the first data

and performing encryption of a second data packet prior to completion of authentication of the

first data packet. *In response*: again this is well known FIFO data processing method which is

addressed in above response. Applicant argues that in claims 24-31, Wu neither discloses or

suggests the claimed invention. In response: the examiner disagree, see rejections above.

6   Any inquiry concerning this communication should be directed to Ho S. Song at telephone

number (703)305-0042. The examiner can normally be reached on Tuesday through Friday from

6:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gail Hayes can be reached at (703)305-9711.

Any inquiry of a general nature or relating to the status of this application or preceding

should be directed to the Group receptionist, whose telephone number is (703)305-3900.

Ho Song

Gail Hayes

GAIL HAYES
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